

**REMARKS**

Applicant submits this Amendment in reply to the Office Action mailed on August 9, 2006.

In the Office Action, the Examiner rejected claims 1-4, 7-13, 15, 16, 29, 30, 32-34, and 44 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ravenscroft (U.S. Patent No. 5,702,418) in view of Dwyer et al. (U.S. Patent No. 5,902,334), and rejected claims 5, 6, 17-21, 23-28, 31, 36-41, and 43 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ravenscroft in view of Dwyer et al. and further in view of Lenker et al. (U.S. Patent No. 5,749,921).

By this Amendment, Applicant adds new claims 45-51. Support for these new claims can be found in, for example, Fig. 1 of the originally filed disclosure. Claims 1-13, 15-21, 23-34, 36-41, and 43-51 are currently pending in this application. Of these claims, claims 1, 5, 17, 29, 31, 36, and 44 are independent.

Applicant respectfully traverses the Examiner's rejections of claims 1-4, 7-13, 15, 16, 29, 30, 32-34, and 44 over Ravenscroft in view of Dwyer et al. Neither reference, taken alone or in combination, teaches or suggests each and every element of independent claims 1, 29, and 44. In particular, the applied references at least fail to disclose the claimed combination, including a catheter having a distal end and a tubular member, a holding sleeve positioned about the tubular member and configured to retain a stent, and an inflatable device positioned about the tubular member and disposed solely between the holding sleeve and the distal end of the catheter.

Ravenscroft discloses a stent delivery system 10 including, among other things, an elongated catheter 11 extending between a proximal handle 12 and a distal end tip

13, an axially extending plastic core 14 having a flexible thin portion 17, and first and second rings 23 attached to the thin portion 17. The rings 23 are configured to be disposed under the stent in a manner that provides support and allows the stent to move with the thin portion 17 of the plastic core 14. Ravenscroft further discloses a balloon 60 to aid in stent expansion. Balloon 60 is configured to underlie a stent 50 between the proximal and distal ends 58 and 59 of the stent 50. See col. 7, lines 10-18; and Fig. 7. In other words, Ravenscroft explicitly teaches that balloon 60 extends beneath the entire length of stent 50.

Ravenscroft, however, fails to disclose a holding sleeve positioned about a tubular member and configured to retain a stent, and an inflatable device disposed solely between the holding sleeve and a distal end of the catheter. Even assuming that first and second rings 23, collectively or alone, can be construed to read on the claimed "holding sleeve," which Applicant does not necessarily concede, Ravenscroft fails to teach each and every element of independent claims 1, 29, and 44 because balloon 60 is not disposed solely between rings 23 and the distal end of the catheter, as required by these claims. See Fig. 7 of Ravenscroft.

Having recognized that Ravenscroft "fails to disclose a holding sleeve configured to retain the positioning of the stent, wherein the inflatable device is disposed solely between the holding sleeve and the distal end of catheter," the Examiner proposes to modify Ravenscroft, with the teachings of Dwyer et al., to include central hub 104. See Office Action at page 3.

Dwyer et al. discloses a method and apparatus for recapturing hooked, self-expanding endoprostheses having, among other things, a self-expanding endoprostheses

10 including proximal and distal anchors 14I and 14R, and a catheter-like device having a pod 84 for percutaneously deploying the endoprosthesis 10. See Figs. 13-14; col. 8, lines 46-48; and col. 11, lines 5-21. Dwyer et al. further discloses that pod 84 includes a spider-like retainer 100, which includes a plurality of spokes 102 that radiate from a central hub 104. As shown in Fig. 17, “[s]pokes 102 of the retainer 100 are arranged to engage the bight defined at the proximal bends 20I of the proximal anchor 14I” of endoprosthesis 10. See col. 12, lines 29-34.

One having ordinary skill in the art would not be motivated to modify Ravenscroft with the central hub 104 of Dwyer et al. for a variety of reasons. First, Ravenscroft includes structure (i.e., rings 23) that performs the same or similar function of central hub 104. The Office Action alleges that hub 104 engages the stent to prevent it from moving when the sheath is retracted. Rings 23 already perform that function, and therefore one would not have looked to modify the Ravenscroft device with the hub 104.

Second, *assuming arguendo* that one of ordinary skill in the art would be motivated to combine the teachings of Ravenscroft and Dwyer et al., which Applicant does not concede, Dwyer et al. fails to cure the above-described deficiencies of Ravenscroft. Particularly, the teachings of Dwyer et al. require retainer 100, hub 104, and spokes 102 to be placed beneath a proximal portion of endoprosthesis 10, as shown in Fig. 17. Therefore, if hub 104 were to be added to the Ravenscroft device, it would necessarily be placed beneath at least a portion of stent 50, and consequently, beneath balloon 60, which, as discussed above, is explicitly disclosed as underlying the entirety of stent 50. The combination of Ravenscroft and Dwyer et al. would therefore

still fail to disclose an inflatable device disposed *solely* between a holding sleeve and the distal end of a catheter, as required by independent claims 1, 29, and 44.

Third, one having ordinary skill in the art would not have been necessarily motivated to utilize hub 104 in conjunction with an inflatable device. Since hub 104 is configured to engage an endoprosthesis by being placed beneath a portion of that endoprosthesis, hub 104 may interfere with the operation of an inflatable device by preventing the inflatable device from concurrently expanding all portions of the endoprosthesis.

Accordingly, the Examiner's proposed combination of Ravenscroft and Dwyer et al. does not suggest each and every recitation of independent claims 1, 29, and 44, and therefore, claims 1, 29, and 44, and their dependents are allowable over these references.

Applicant respectfully traverses the rejections of claims 5, 6, 17-21, 23-28, 31, 36-41, and 43 over Ravenscroft as modified by Dwyer et al. and further in view of Lenker et al. Even if Lenker et al. teaches what the Examiner alleges (and Applicant does not necessarily agree that it does), this reference fails to overcome the shortcomings of the references discussed above. Accordingly, claims 5, 6, 17-21, 23-38, 31, 36-41, and 43 are allowable at least for the reasons discussed above with respect to Ravenscroft and Dwyer et al.

New claims 45-51 are allowable over the applied references. Claims 45-51 require the holding sleeve to be spaced from the inflatable device. Even assuming that hub 104 of Dwyer et al. could be construed to read upon the claimed holding sleeve, which Applicant does not concede, one having ordinary skill in the art would not have

been motivated to use hub 104 with an inflatable device spaced from hub 104. Specifically, because Dwyer et al. explicitly discloses that hub 104 is placed beneath a proximal portion of an endoprosthesis, it would not have been obvious to space an inflatable device away from hub 104, and consequently the portion of the endoprosthesis that engages hub 104, because such spacing may prevent the inflatable device from expanding the portions of the endoprosthesis spaced away from the inflatable device. Accordingly, for at least these reasons, new claims 45-51 are patentable over the Examiner's proposed combination of references.

If the Examiner wishes to discuss this application, he is invited to call the undersigned at (202) 408-4140.

The Office Action contains characterizations of the claims and the related art with which Applicant does not necessarily agree. Unless expressly noted otherwise, Applicant declines to subscribe to any statement or characterization in the Office Action.

In discussing the specification, claims, and/or drawings in this Amendment, it is to be understood that Applicant is in no way intending to limit the scope of the claims to any exemplary embodiments described in the specification or abstract and/or shown in the drawings. Rather, Applicant is entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

Please grant any extensions of time required to enter this Amendment and  
charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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By:



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